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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/081,207	02/25/2002	Marlon D. Cowart	6791.US.02	2847

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EXAMINER

BALASUBRAMANIAN, VENKATARAMAN

ART UNIT

PAPER NUMBER

1624

DATE MAILED: 09/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/081,207	COWART ET AL.
Examiner	Art Unit	
Venkataraman Balasubramanian	1624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on \_\_\_\_ .

2a)  This action is **FINAL**.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 1-164 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) \_\_\_\_\_ is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claim(s) 1-164 are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)  The proposed drawing correction filed on \_\_\_\_\_ is: a)  approved b)  disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)  The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)  All b)  Some \* c)  None of:

1.  Certified copies of the priority documents have been received.
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14)  Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a)  The translation of the foreign language provisional application has been received.

15)  Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1)  Notice of References Cited (PTO-892) 4)  Interview Summary (PTO-413) Paper No(s). \_\_\_\_ .  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948) 5)  Notice of Informal Patent Application (PTO-152)  
3)  Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6)  Other: \_\_\_\_\_

## DETAILED ACTION

Claims 1-164 are pending.

### *Election/Restrictions*

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-47, 49-54, 61-73, 77-86, 103-111, and 127-164, drawn to compound of formula I, II, III, IV, V, VI wherein A is a covalent bond and D is oxygen, and R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub> or R<sub>7</sub> is not a heterocycle and X, Y, Z in formula II, III, IV, V, VI are carbon, namely benzofuran, composition and method of use of, classified in class 549 subclass 462, class 514, subclass 461.
- II. Claims 1, 43-47, 49-54, 61-73, 77-86, 103-111 and 127-164, drawn to compound of formula I, II, III, IV, V, VI wherein A is a covalent bond and D is sulfur, and R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub> or R<sub>7</sub> is not a heterocycle and X, Y, Z in formula II, III, IV, V, VI are carbon, namely benzothiophene, composition and method of use of, classified in class 549 subclass 49, class 514, subclass 438
- III. Claims 1, 43, 96-103, 112-127, 132, 136, 144, and 155-164, drawn to compound of formula I, II, III, IV, V, VI wherein A is a carbonyl and D is oxygen, and R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub> or R<sub>7</sub> is not a heterocycle and X, Y, Z in formula II, III, IV, V, VI are carbon, namely chroman, composition and method of use of, classified in class 549 subclass 283, class 514, subclass 451.
- IV. Claims 1, 43, 96-103, 112-127, 132, 136, 144, and 155-164, drawn to compound of formula I, II, III, IV, V, VI wherein A is a carbonyl and D is

sulfur, and R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub> or R<sub>7</sub> is not a heterocycle and X, Y, Z in formula II, III, IV, V, VI are carbon, namely thiochroman, composition and method of use of, classified in class 549 subclass 28, class 514, subclass 432.

V. Claims 1-45, 49-52, 61-66, 77-83, 103-111, 127-129, 132-134, 136-140, 144-148 and 151-164, drawn to compound of formula I, II, III, IV, V, VI wherein A is a covalent bond and D is oxygen, and R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub> or R<sub>7</sub> is a heterocycle bearing X, Y, Z wherein X, Y, Z are nitrogen namely triazine, composition and method of use, classified in class 544, subclass 182, class 514, subclass 241.

VI. Claims 1-45, 49-52, 61-66, 77-83, 103-111, 127-129, 132-134, 136-140, 144-148 and 151-164, drawn to compound of formula I, II, III, IV, V, VI wherein A is a covalent bond and D is oxygen, and R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub> or R<sub>7</sub> is a heterocycle bearing X, Y, Z wherein X, Y, Z are nitrogen, Z is carbon namely, pyridazine, composition and method of use, classified in class 544, subclass 238, class 514, subclass 252.01.

VII. Claims 1-45, 49-52, 61-66, 77-83, 103-111, 127-129, 132-134, 136-140, 144-148 and 151-164, drawn to compound of formula I, II, III, IV, V, VI wherein A is a covalent bond and D is oxygen, and R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub> or R<sub>7</sub> is a heterocycle bearing X, Y, Z wherein X, Z are nitrogen, Y is carbon namely pyrimidine, composition and method of use, classified in class 544, subclasses 242, 319, class 514, subclass 256.

VIII. Claims 1-45, 49-52, 61-66, 77-83, 103-111, 127-129, 132-134, 136-140, 144-148 and 151-164, drawn to compound of formula I, II, III, IV, V, VI wherein A is a covalent bond and D is oxygen, and R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub> or R<sub>7</sub> is a heterocycle bearing X, Y, Z wherein Y, Z, are nitrogen, X is carbon namely pyrazine, composition and method of use, classified in class 544, subclass 405, class 514, subclass 252.10.

IX. Claims 1-45, 49-52, 55-66, 74-83, 87-95, 103-111, 127-129, 132-134, 136-140, 144-148, and 151-164, drawn to compound of formula I, II, III, IV, V, VI wherein A is a covalent bond and D is oxygen, and R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub> or R<sub>7</sub> is a heterocycle bearing X, Y, Z wherein X or Y or Z is nitrogen, the other two carbons, namely pyridine, composition and method of use, classified in class 546, subclass 268.1, class 514, subclass 336.

X. Claims 1-164, drawn to compound of formula I-VI, wherein A-D is a group not provided for in invention I-IX, and R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub> or R<sub>7</sub> is a heterocycle group, composition and method of use, classified in classes various subclasses various depending upon the preferred embodiment of heterocyclic group in the side chain. If this group is elected, applicants should elect a suitable A-D combination other than those provided for in invention I-IX and a specific heterocyclic group. Based on the elected subject matter, claims, which read on the elected subject matter, will be examined.

The inventions are distinct, each from the other because of the following reasons:

Inventions of group I-VIII are independent and distinct from each other because they are directed to dissimilar compounds with varying cores such triazines Vs pyrimidine vs pyridazine vs pyrazine vs pyridine vs benzo substituted benzopyran and benzofuran core. Consequently, the groups have different classifications and require separate prior art searches. Art which may render obvious or anticipate one of the groups would not necessarily do the same for the other group. Each can support a patent as the compounds of each group are capable of being utilized alone not in combination with other members listed in the Markush group as evidenced by the references cited in the Information Disclosure Statement. In addition based on the choice of heterocyclic ring and positively recited heterocyclic ring search have to be extended to other classes/ subclasses. Searching all controlling classes and subclasses is mandatory. Hence, it would be of serious search burden search vast number heterocyclic cores embraced in the instant claims with the limited time available per case.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

This application contains claims directed to the following patentably distinct species of the claimed invention: see claims 5, 21, 26, 47, 54, 60, 66, 68, 73, 86, 95, 153, and 154.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is

finally held to be allowable. Currently, claims 1-4, 6-20, 22-25, 27-46, 48-53, 55-59, 61-65, 67, 69-72, 74-85, 86-94, 96-152, and 155-164 are generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Due to distinct nature of the inventions, a written restriction is set forth in writing.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

### **Conclusion**

Any inquiry concerning this communication from the examiner should be addressed to Venkataraman Balasubramanian (Bala) whose telephone number is (703) 305-1674. The examiner can normally be reached on Monday through Thursday from 8.00 AM to 6.00 PM. The Supervisory Patent Examiner (SPE) of the art unit 1624 is Mukund Shah whose telephone number is (703) 308-4716. The fax phone number for the organization where this application or proceeding is assigned (703) 308-4556.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1235.

*V. Balasubramanian*  
Venkataraman Balasubramanian

09/20/2003